

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A semiconductor light-emitting device, comprising:
 - a substrate;
 - a n-type semiconductor layer formed on the substrate;
 - a recess formed on a major surface of the n-type semiconductor layer, the recess having a bottom surface[[,]] and sidewalls with a different planar orientation from the bottom surface;
 - an active layer conformably formed on the n-type semiconductor layer such that a portion of the active layer is located within the recess and a portion of the active layer is located outside the recess; and,
 - a p-type semiconductor layer formed on the active layer such that a portion of the p-type layer is formed on the portion of the active layer located within the recess, wherein the portion of the p-type layer has a bottom surface having the same planar orientation as the bottom surface of the recess and sidewalls having the same planar orientation as the sidewalls of the recess.
2. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein the p-type semiconductor layer, the n-type semiconductor layer, and the active layer each comprise a gallium nitride layer.
3. (Canceled)
4. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein the active layer has a quantum well structure including a well layer comprising gallium nitride and indium.

5. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein at least one surface of the n-type semiconductor layer in contact with the active layer defines the major surface of the n-type semiconductor layer.

6. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein at least one surface of the n-type semiconductor layer in contact with the active layer is vertical relative to the major surface of the n-type semiconductor layer.

7. (Previously Presented) The semiconductor light-emitting device of claim 5, wherein the n-type semiconductor layer comprises a gallium nitride layer; and,

wherein the major surface of the n-type semiconductor layer is a C plane of the gallium nitride layer.

8. (Previously Presented) The semiconductor light-emitting device of claim 6, wherein the n-type semiconductor layer comprises a gallium nitride layer; and,

wherein the surface of the n-type semiconductor layer that is vertical relative to the major surface of the n-type semiconductor layer is aligned with an A or M plane of the gallium nitride layer.

9. (Previously Presented) The semiconductor light-emitting device of claim 8, wherein the active layer comprises a plurality of M or A planes that intersect each other at angles of 30°, 60°, 90°, 120°, 150°, 210°, 240°, 270°, 300° or 330°, as viewed from an upper surface of the n-type semiconductor layer.

10. (Previously Presented) The semiconductor light-emitting device of claim 8, wherein the active layer has a M or A plane formed in a striped fashion as viewed from an upper surface of the n-type semiconductor layer.

11. (Canceled)

12. (Previously Presented) The semiconductor light-emitting device of claim 1, further comprising:

a first electrode formed on a surface of the n-type semiconductor layer exposed by etching the p-type semiconductor layer and the active layer; and
a second electrode formed on a surface of the p-type semiconductor layer.

13. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein the active layer emits light components having two or more different major peak wavelengths, and the light components are mixed to produce a color.

14. (Withdrawn) A semiconductor light-emitting device fabrication process, comprising:

a first step of forming a first electrically conductive type semiconductor layer on a growth substrate;

a second step that is carried out after the first step to form a recess in the first electrically conductive type semiconductor layer by etching,

a third step that is carried out after the second step to form an active layer contiguously to two or more different plane orientations of the first electrically conductive type semiconductor layer, and

a fourth step of forming a second electrically conductive type semiconductor layer.

15. (Withdrawn) The semiconductor light-emitting device fabrication process according to claim 14, wherein said semiconductor layers and said active layers are each a gallium nitride semiconductor layer.

16. (Withdrawn) The semiconductor light-emitting device fabrication process according to claim 15, wherein said growth substrate in the first step is a sapphire substrate whose major surface is defined by a C plane, and the first electrically conductive type semiconductor layer is grown on the C plane of said substrate.

17. (Withdrawn) The semiconductor light-emitting device fabrication process according to claim 15, wherein said recess in the second step is formed by exposing an M plane or/and an A plane of the gallium nitride semiconductor layer.

18. (Withdrawn) The semiconductor light-emitting device fabrication process according to claim 15, wherein said active layer has a quantum well structure including a well layer comprising an In-containing gallium nitride semiconductor layer.

19. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein the recess is one of a plurality of recesses formed in the n-type semiconductor layer and arranged in a repetitively corrugated shape with back-to-back side face angles of 120° and 240°; and,

wherein each of the plurality of recesses has a bottom surface aligned with the major surface of n-type semiconductor layer and sidewalls having a different planar orientation from the bottom surface.

20. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein the n-type semiconductor layer comprises a gallium nitride layer;

wherein the recess is one of a plurality of stripe-shaped recesses formed in the gallium nitride layer; and,

wherein each of the plurality of stripe-shaped recesses has a bottom surface aligned with a C-plane of the gallium nitride layer and sidewalls aligned with an M-plane or an A-plane of the gallium nitride layer.

21. (Previously Presented) The semiconductor light-emitting device of claim 1, wherein the recess is one of a plurality of triangle shaped recesses formed in the n-type semiconductor layer.